

Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1. (Currently amended) A method for winding a stator of a brushless direct current motor having a stator body with a pre-determined number of ~~wound~~ stator teeth, wherein the stator teeth are respectively wound with two
5 coils which are magnetically coupled and which permit the generation of opposite magnetic fields by the supply of current with variable directional orientation, and wherein each of the two coils comprises a predetermined number of conductors, the method comprising the steps of:
- 10 a) simultaneously winding each of the two coils into said stator teeth in several partial winding ~~steps,~~ steps with an even number of $2n$ conductors, allocating a first set of n conductors of the $2n$ conductors to a first coil of said two coils and allocating the other set of n
15 conductors of the $2n$ conductors to ~~the other~~ a second coil of said two coils; and,
- b) repeating step a) until the predetermined number of conductors per coil has been reached.

2-4 (Canceled)

5. (Withdrawn) Stator for a brushless direct current motor, the stator comprising:

a stator body (9) with a pre-determined number of wound stator teeth (3), the stator teeth (3) being respectively wound with two coils ($W1, W3; W2, W4$) which are

magnetically coupled and which facilitate by the supply of current of variable directional orientation the generation of opposing magnetic fields in said stator teeth;

each of the two coils (W1, W3, or W2, W4) including a predetermined even number of $2n$ conductors, of which a first set of n conductors are allocated to a first one of the two coils and the other n conductors are allocated to the other coil of the two coils; and,

the $2n$ conductors being conducted over the stator teeth in a substantially constant position relative to each other over the entire coil length.

6-10 (Canceled)

11. (Currently amended) A coil winding method for winding a predetermined number of conductors to form a set of magnetically coupled coil pairs on a plurality of stator teeth of a stator body in a motor, each set of coil pairs
5 generating opposing magnetic fields in the plurality of stator teeth, the coil winding method comprising the steps of:

~~a) in a first partial coil winding step,~~
simultaneously winding $2n$ conductors together onto a first
10 plurality of stator teeth of said stator body; ~~b) selecting~~
~~body,~~ a first group n_1 of said $2n$ conductors ~~and assigning~~
~~the first group n_1 being assigned~~ to a first coil of said set
of magnetically coupled coil pairs; ~~c) selecting pairs and~~
a second group n_2 of said $2n$ conductors ~~and assigning the~~
15 ~~second group n_2 being assigned~~ to a second coil of said set
of magnetically coupled coil pairs; and,

~~d) repeating steps a) through c)~~ said

simultaneous winding of said $2n$ conductors until said predetermined number of conductors are wound onto said first plurality of stator teeth to form a first magnetically coupled coil pair of said set of magnetically coupled coil pairs.

12. (Currently amended) ~~The A coil winding method according to claim 11 further including:~~ for winding a predetermined number of conductors to form a set of magnetically coupled coil pairs on a plurality of stator teeth of a stator body in a motor, each set of coil pairs generating opposing magnetic fields in the plurality of stator teeth, the coil winding method comprising:

a) in a first partial coil winding step, simultaneously winding $2n$ conductors together onto a first plurality of stator teeth of said stator body;

b) selecting a first group n_1 of said $2n$ conductors and assigning the first group n_1 to a first coil of said set of magnetically coupled coil pairs;

c) selecting a second group n_2 of said $2n$ conductors and assigning the second group n_2 to a second coil of said set of magnetically coupled coil pairs;

d) repeating steps a) through c) until said predetermined number of conductors are wound onto said first plurality of stator teeth to form a first magnetically coupled coil pair of said set of magnetically coupled coil pairs; and,

winding said predetermined number of conductors on a second plurality of stator teeth of said stator body in said motor to form a second magnetically coupled coil pair of said set of magnetically coupled coil pairs.

13. (Previously presented) The method according to claim 12 wherein the step of winding said predetermined number of conductors on said second plurality of stator teeth includes the steps of:

5 e) in a second partial coil winding step, simultaneously winding $2n$ conductors together onto a second plurality of stator teeth of said stator body;

f) selecting a third group n_3 of said $2n$ conductors and assigning the third group n_3 to a third coil
10 of said set of magnetically coupled coil pairs;

g) selecting a fourth group n_4 of said $2n$ conductors and assigning the fourth group n_4 to a fourth coil of said set of magnetically coupled coil pairs; and,

h) repeating steps e) through g) until said
15 predetermined number of conductors are wound onto said second plurality of stator teeth to form said second magnetically coupled coil pair of said set of magnetically coupled coil pairs.

14. (Previously presented) The method according to claim 13 wherein;

the first partial coil winding step includes simultaneously winding said $2n$ conductors onto said first
5 plurality of stator teeth different from said second plurality of stator teeth; and,

the second partial coil winding step includes simultaneously winding said $2n$ conductors onto said second plurality of stator teeth different from said first
10 plurality of stator teeth.

15. (Previously presented) The method according to claim 14 wherein:

the first partial coil winding step of simultaneously winding said $2n$ conductors onto said first plurality of stator teeth includes simultaneously winding two conductors onto said first set of six stator teeth; and,

the second partial coil winding step of simultaneously winding said $2n$ conductors onto said second plurality of stator teeth includes simultaneously winding two conductors onto said second set of six stator teeth.

16. (Currently amended) ~~The~~ A coil winding method according to claim 11 for winding a predetermined number of conductors to form a set of magnetically coupled coil pairs on a plurality of stator teeth of a stator body in a motor, each set of coil pairs generating opposing magnetic fields in the plurality of stator teeth, the coil winding method comprising:

a) in a first partial coil winding step, simultaneously winding $2n$ conductors together onto a first plurality of stator teeth of said stator body;

b) selecting a first group n_1 of said $2n$ conductors and assigning the first group n_1 to a first coil of said set of magnetically coupled coil pairs;

c) selecting a second group n_2 of said $2n$ conductors and assigning the second group n_2 to a second coil of said set of magnetically coupled coil pairs; and,

d) repeating steps a) through c) until said predetermined number of conductors are wound onto said first plurality of stator teeth to form a first magnetically coupled coil pair of said set of magnetically coupled coil

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pairs; and, wherein: the step of assigning said first group n_1 of said $2n$ conductors includes, prior to performing each said at least one first partial winding step, connecting said first group n_1 of said $2n$ conductors to a first
25 electrical connection contact 15_I on said stator ~~body; and,~~
body, and the step of assigning said second group n_2 of said $2n$ conductors includes, prior to performing each said at least one first partial winding step, connecting said second group n_2 of said $2n$ conductors to a second electrical
30 connection contact 15_{II} on said stator body.

17. (Previously presented) The method according to claim 16 wherein:

the step of assigning said first group n_1 of said $2n$ conductors further includes, after performing said each
5 at least one first partial winding step, connecting said first group n_1 of said $2n$ conductors to a third electrical connection contact 15_{III} on said stator body; and,

the step of assigning said second group n_2 of said $2n$ conductors further includes, after performing said each
10 at least one first partial winding step, connecting said second group n_2 of said $2n$ conductors to a fourth electrical connection contact 15_{IV} on said stator body.

18. (Currently amended) A stator having a stator body defining a plurality of stator teeth carrying conductors to form a set of magnetically coupled coil pairs, the conductors being wound onto said stator teeth by:

5 ~~a)~~ in a first partial coil winding step, forming a first coupled coil pair by:

a) simultaneously winding $2n$

conductors together onto a first plurality of stator teeth of said stator body;

10 b) selecting a first group n_1 of said ~~2n conductors~~ and assigning the first group n_1 to a first coil of said ~~set of magnetically first~~ coupled coil ~~pairs pair~~; and,

15 c) selecting a second group n_2 of said ~~2n conductors~~ and assigning the second group n_2 to a second coil of said ~~set of magnetically first~~ coupled coil ~~pairs pair~~; and,

20 d) repeating steps a) through c) until said predetermined number of conductors are wound onto said first plurality of stator teeth to form [a] said first magnetically coupled coil pair of said set of magnetically coupled coil pairs.

19. (Previously presented) A stator having a stator body defining a plurality of stator teeth carrying conductors to form sets of magnetically coupled coil pairs, the conductors being wound onto said stator teeth by:

5 a) in a first partial coil winding step, simultaneously winding a first pair of conductors together onto a first plurality of stator teeth of said stator body;

10 b) selecting a first group n_1 of said first pair of conductors and assigning the first group n_1 to a first coil of said set of magnetically coupled coil pairs;

15 c) selecting a second group n_2 of said first pair of conductors and assigning the second group n_2 to a second coil of said set of magnetically coupled coil pairs;

15 d) repeating steps a) through c) until a predetermined number of conductors are wound onto said first

plurality of stator teeth to form a first magnetically coupled coil pair;

e) in a second partial coil winding step, simultaneously winding a second pair of conductors together
20 onto a second plurality of stator teeth of said stator body different from said first plurality of stator teeth;

f) selecting a third group n_3 of said second pair of conductors and assigning the third group n_3 to a third
coil of said set of magnetically coupled coil pairs;

25 g) selecting a fourth group n_4 of said second pair of conductors and assigning the fourth group n_4 to a fourth coil of said set of magnetically coupled coil pairs; and,

h) repeating steps e) through g) until a
30 predetermined number of conductors are wound onto said second plurality of stator teeth to form a second magnetically coupled coil pair.

20. (Previously presented) A coil winding method for winding a predetermined number of conductors to form a set of magnetically coupled coil pairs on a plurality of stator teeth of a stator body in a motor, each set of
5 coil pairs generating opposing magnetic fields in the plurality of stator teeth, the coil winding method comprising:

a) in a partial coil winding step, simultaneously winding $2n$ conductors together onto a first
10 plurality of stator teeth of said stator body;

b) selecting a first group n_1 of said $2n$ conductors and assigning the first group n_1 to a first coil of said set of magnetically coupled coil pairs by, prior to

performing said partial winding step, connecting said first
15 group n_1 of said $2n$ conductors to a first electrical
connection contact on said stator body;

c) selecting a second group n_2 of said $2n$
conductors and assigning the second group n_2 to a second coil
of said set of magnetically coupled coil pairs by, prior to
20 performing said partial winding step, connecting said second
group n_2 of said $2n$ conductors to a second electrical
connection contact on said stator body; and,

d) repeating steps a) through c) until said
predetermined number of conductors are wound onto said first
25 plurality of stator teeth to form a first magnetically
coupled coil pair of said set of magnetically coupled coil
pairs.

21. (Previously presented) A coil winding
method for winding a predetermined number of conductors to
form a set of magnetically coupled coil pairs on a plurality
of stator teeth of a stator body in a motor, each set of
5 coil pairs generating opposing magnetic fields in the
plurality of stator teeth, the coil winding method
comprising:

a) in a first partial coil winding step,
simultaneously winding a first pair of conductors together
10 onto a first plurality of stator teeth of said stator body;

b) selecting a first group n_1 of said first pair
of conductors and assigning the first group n_1 to a first
coil of said set of magnetically coupled coil pairs;

c) selecting a second group n_2 of said first pair
15 of conductors and assigning the second group n_2 to a second
coil of said set of magnetically coupled coil pairs;

d) repeating steps a) through c) until said predetermined number of conductors are wound onto said first plurality of stator teeth to form a first magnetically coupled coil pair of said set of magnetically coupled coil pairs;

e) in a second partial coil winding step, simultaneously winding a second pair of conductors together onto a second plurality of stator teeth of said stator body different from said first plurality of stator teeth;

f) selecting a third group n_3 of said second pair of conductors and assigning the third group n_3 to a third coil of said set of magnetically coupled coil pairs;

g) selecting a fourth group n_4 of said second pair of conductors and assigning the fourth group n_4 to a fourth coil of said set of magnetically coupled coil pairs; and,

h) repeating steps e) through g) until said predetermined number of conductors are wound onto said second plurality of stator teeth to form said second magnetically coupled coil pair of said set of magnetically coupled coil pairs.

22. (New) A stator having a stator body defining a plurality of stator teeth carrying conductors to form a set of magnetically coupled coil pairs, the conductors being wound onto said stator teeth by:

forming a first coupled coil pair by:

a) simultaneously winding $2n$ conductors together onto a first plurality of stator teeth of said stator body;

b) selecting a first group n_1 of said

- 10 2n conductors and assigning the first group n_1 to
 a first coil of said first coupled coil pair; and,
 c) selecting a second group n_2 of said
 2n conductors and assigning the second group n_2 to
 a second coil of said first coupled coil pair;
15 repeating steps a) through c) until said
 predetermined number of conductors are wound onto said first
 plurality of stator teeth to form said first magnetically
 coupled coil pair of said set of magnetically coupled coil
 pairs;
20 forming a second coupled pair by:
 d) simultaneously winding 2n
 conductors together onto a second plurality of
 stator teeth of said stator body;
 e) selecting a first group n_1 of said
25 2n conductors and assigning the first group n_1 to
 a first coil of said second coupled coil pair;
 and,
 f) selecting a second group n_2 of said
 2n conductors and assigning the second group n_2 to
30 a second coil of said second coupled coil pair;
 repeating steps d) through f) until said
 predetermined number of conductors are wound onto said
 second plurality of stator teeth to form said second
 magnetically coupled coil pair of said set of magnetically
35 coupled coiled pairs.

23. (New) The method according to claim 11
further including:

winding said predetermined number of conductors on
a second plurality of stator teeth of said stator body in

5 said motor to form a second magnetically coupled coil pair of said set of magnetically coupled coil pairs.

24. (New) The method according to claim 23 wherein the step of winding said predetermined number of conductors on said second plurality of stator teeth includes the steps of:

- 5 e) in a second partial coil winding step, simultaneously winding $2n$ conductors together onto a second plurality of stator teeth of said stator body;
- f) selecting a third group n_3 of said $2n$ conductors and assigning the third group n_3 to a third coil
10 of said set of magnetically coupled coil pairs;
- g) selecting a fourth group n_4 of said $2n$ conductors and assigning the fourth group n_4 to a fourth coil of said set of magnetically coupled coil pairs; and,
- h) repeating steps e) through g) until said
15 predetermined number of conductors are wound onto said second plurality of stator teeth to form said second magnetically coupled coil pair of said set of magnetically coupled coil pairs.

25. (New) The method according to claim 24 wherein;

(the first partial coil winding step) includes simultaneously winding said $2n$ conductors onto said first
5 plurality of stator teeth different from said second plurality of stator teeth; and,

the second partial coil winding step includes simultaneously winding said $2n$ conductors onto said second plurality of stator teeth different from said first

10 plurality of stator teeth.

26. (New) The method according to claim 25
wherein:

the first partial coil winding step of
15 simultaneously winding said 2n conductors onto said first
plurality of stator teeth includes simultaneously winding
two conductors onto said first set of six stator teeth; and,
the second partial coil winding step of
simultaneously winding said 2n conductors onto said second
20 plurality of stator teeth includes simultaneously winding
two conductors onto said second set of six stator teeth.

27. (New) The method according to claim 11
wherein:

the step of assigning said first group n_1 of said
2n conductors includes, prior to performing each said at
5 least one first partial winding step, connecting said first
group n_1 of said 2n conductors to a first electrical
connection contact 15_I on said stator body; and,


the step of assigning said second group n_2 of said
2n conductors includes, prior to performing each said at
10 least one first partial winding step, connecting said second
group n_2 of said 2n conductors to a second electrical
connection contact 15_{II} on said stator body.

28. (New) The method according to claim 27
wherein:

the step of assigning said first group n_1 of said
2n conductors further includes, after performing said each
5 at least one first partial winding step, connecting said

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first group n_1 of said $2n$ conductors to a third electrical connection contact 15_{III} on said stator body; and,

 the step of assigning said second group n_1 of said $2n$ conductors further includes, after performing said each 10 at least one first partial winding step, connecting said second group n_2 of said $2n$ conductors to a fourth electrical connection contact 15_{IV} on said stator body.
